

This listing of claims replaces all prior listings and versions of the claims in the application.

LISTING OF CLAIMS

1. (currently amended) A method for a host system to emulating emulate execution of instructions, the instructions designed for execution by a target system~~in a host system~~, comprising the steps of:

calculating a first quantity representative of a target execution speed at which the instructions are executable by said target system;

determining a variance~~in execution speed between said first quantity the target system executing said instructions and the a second quantity representative of a host execution speed~~at which said host system emulates~~emulating~~ execution of said the instructions; and

based on said variance, dynamically adjusting said host execution speed by dynamically increasing said the host execution speed of the host system based on the variance when said host execution speed is less than said target execution speed, and dynamically decreasing said host execution speed when said host execution speed is greater than said target execution speed.~~to conform to the execution speed of the target system.~~

2. (canceled)

3. (canceled)

4. (currently amended) A method for simulating an operating speed of processing in an emulated target system corresponding

to a rate of execution of instruction cycles on at least one host system, comprising the steps of

defining a benchmark sample by selecting a reference determined by an arbitrary time quantum of said speed;

multiplying said reference by said rate of execution of instruction cycles;

tracking said instruction cycles executed and determining whether a threshold value has been exceeded;

interrupting said processing when said threshold value has been exceeded;

determining an elapsed time period by querying a timing source which is associated with the host system ~~an~~ and unaffected by said processing;

determining a timing reference by comparing said elapsed time with said time quantum; and,

using said timing reference to adjust said rate so as to simulate said operating speed of the target system.

5. (canceled)

6. (currently amended) The method of claim 1, wherein the step of dynamically adjusting the execution speed of ~~the host systems~~ said host system comprises the steps of:

pre-determining an acceptable variance ~~in execution speed~~ between ~~the said host execution speed system and the said target execution speed, system, and~~ wherein said host execution speed is increased only when the host systemsaid host system is emulating execution of instructions slower more slowly than said the target execution speed system executes said instructions by more than said pre-determined acceptable variance, increasing the speed of emulation execution by the host system; or and said host execution speed is decreased only when the host systemsaid

host system is emulating execution of ~~said the instructions more rapidly -faster than said the-target execution speed by more than said pre-determined acceptable variance~~system executes said instructions by more than said pre-determined acceptable variance, decreasing the speed of emulation execution by the ~~host system~~.

7. (currently amended) The method of claim 1, wherein said variance is determined as a ratio between said first quantity and said second quantity~~speed of the target system executing said instructions and the speed of the host system emulating executing said instructions~~.

8. (new) The method of claim 1, wherein said first quantity is a predetermined interval of time for which said target system is calculated to execute a predetermined number of instructions, and said second quantity is an actual amount of time used by said host system to emulate execution of a particular block of instructions containing said predetermined number of instructions.

9. (new) The method of claim 8, wherein said host execution speed is dynamically adjusted for subsequent execution based on said variance determined for said particular block.

10. (new) A machine-readable recording medium having information recorded thereon for performing a method for a host system to emulate execution of instructions, the instructions designed for execution by a target system, the method comprising the steps of:

calculating a first quantity representative of a target execution speed at which the instructions are executable by said target system;

determining a variance between said first quantity and a second quantity representative of a host execution speed at which said host system emulates execution of the instructions; and

based on said variance, dynamically adjusting said host execution speed by dynamically increasing said host execution speed when said host execution speed is less than said target execution speed, and dynamically decreasing said host execution speed when said host execution speed is greater than said target execution speed.

11. (new) The machine-readable medium of claim 10, wherein the step of dynamically adjusting the execution speed of said host system comprises the steps of:

pre-determining an acceptable variance between said host execution speed and said target execution speed, wherein said host execution speed is increased only when said host system is emulating execution of the instructions more slowly than said target execution speed by more than said pre-determined acceptable variance, and said host execution speed is decreased only when said host system is emulating execution of the instructions more rapidly than said target execution speed by more than said pre-determined acceptable variance.

12. (new) The machine-readable medium of claim 11, wherein said variance is determined as a ratio between said first quantity and said second quantity.

13. (new) The machine-readable medium of claim 10, wherein said first quantity is a predetermined interval of time for which said target system is calculated to execute a predetermined number of instructions, and said second quantity is an actual amount of time used by said host system to emulate execution of a particular block of instructions containing said predetermined number of instructions.

14. (new) The machine-readable medium of claim 13, wherein said host execution speed is dynamically adjusted for subsequent execution based on said variance determined for said particular block.

15. (new) A host system operable to emulate execution of instructions designed for execution by a target system, said host system operable to determine a variance between a first calculated quantity representative of a target execution speed at which the instructions are executable by said target system and a second quantity representative of a host execution speed at which said host system emulates execution of the instructions, such that based on said variance, said host system is operable to dynamically adjust said host execution speed by dynamically increasing said host execution speed when said host execution speed is less than said target execution speed, and by dynamically decreasing said host execution speed when said host execution speed is greater than said target execution speed.

16. (new) The host system of claim 15, wherein said host system is operable to dynamically adjust said host execution speed by pre-determining an acceptable variance between said host execution speed and said target execution speed, such that said host system is operable to increase said host

execution speed only when said host system is emulating execution of the instructions more slowly than said target execution speed by more than said pre-determined acceptable variance, and said host system is operable to decrease said host execution speed only when said host system is emulating execution of the instructions more rapidly than said target execution speed by more than said pre-determined acceptable variance.

17. (new) The host system of claim 16, wherein said variance is determined as a ratio between said first quantity and said second quantity.

18. (new) The host system of claim 15, wherein said first quantity is a predetermined interval of time for which said target system is calculated to execute a predetermined number of instructions, and said second quantity is an actual amount of time used by said host system to emulate execution of a particular block of instructions containing said predetermined number of instructions.

19. (new) The host system of claim 18, wherein said host system is operable to dynamically adjust said host execution speed for subsequent execution based on said variance determined for said particular block.